



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

127A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,586	03/23/2004	Thomas Christopher Cook	64671-0541	2233
20786	7590	11/21/2006	EXAMINER	
KING & SPALDING LLP 1180 PEACHTREE STREET ATLANTA, GA 30309			BLEVINS, JERRY M	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,586

Applicant(s)

COOK, THOMAS CHRISTOPHER

Examiner

Jerry Martin Blevins

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,5,8-11,17,18,21 and 31-37 is/are pending in the application.
- 4a) Of the above claim(s) 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,5,10,11 and 17 is/are rejected.
- 7) ☒ Claim(s) 8,9,18 and 31-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 10, 2006 has been entered.

Election/Restrictions

Newly submitted claim 21 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claim 21 as originally filed was directed to a method for using a product, namely a method for identifying an optical fiber. This method was not substantially distinct or patentably independent from the color-coded optical fiber system product found in the remaining claims of the invention. However, claim 21 as presently amended is now directed to a production method of a color-coded optical fiber system, including method steps patentably independent from that of the product produced, particularly those of extrusion and injection. The new statutory class of claim 21 places it in a new search classification and furthermore renders it patentably independent from the remaining product claims as originally and presently filed.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 21 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

Applicant's arguments with respect to claims 2, 5, and 10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments, see pages 9-14, filed August 9, 2006, with respect to claims 8, 9, and 18 have been fully considered and are persuasive. The rejection of claims 8, 9, and 18 has been withdrawn.

Applicant's arguments filed August 9, 2006, with respect to claims 11 and 17 have been fully considered but they are not persuasive.

Namely, previously applied prior art reference US 6,208,790 to Zopf et al. teaches the homogenous filling of essentially all the volume, as shown in Figure 2 and in column 1, line 66 – column 2, line 10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,898,451 to Story.

Regarding claim 2, Story teaches a plurality of color-coded buffer tubes (Figure 2, abstract, column 2, lines 3-52), color-coded filling material disposed in each of the color-coded buffer tubes (Figure 2, abstract, column 2, lines 3-52), and a plurality of color-coded optical fibers disposed in each of the color-coded buffer tubes (column 1, lines 5-28). Story does not teach this combination in any one cable, or that any one cable has the provision of a first, second, and third level of color-coded identification. It would have been obvious to one of ordinary skill in the art at the time of the invention to include in one cable each of the limitations taught by Story. The motivation would have been to increase the number of individually identifiable fibers used in the cable.

Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Story in view of Zopf.

Regarding claim 5, Story renders obvious the limitations of the base claim 2. Story does not teach that the color-coded filling material is a color-coded gel. Zopf teaches color-coded gels as color-coded filling materials (column 1, line 66 – column 2, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the color-coded filling material of Story out of a gel material, as taught by Zopf. The motivation would have been to reduce the stress on the fibers (Zopf, column 1, line 66 – column 2, line 10).

Regarding claim 17, Story teaches a system for identifying optical fibers comprising a plurality of buffer tubes; color-coded optical fibers, and color-coded filling material disposed within at least one of the buffer tubes (Figure 2, abstract, and column 2, lines 3-52). Story also teaches that each buffer tube contains a different color of filling material (Figure 2, abstract, and column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube providing an internal volume (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). Zopf also teaches color-coded gelatinous filling materials occupying essentially all of the internal volume (column 1, line 66 – column 2, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the cable of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. It also would have been obvious to one of ordinary skill in the art at the time of the invention to make the color-coded filling material of Story out of a gel material which essentially occupies all of the internal volume, as taught by Zopf. The motivation would have been to reduce the stress on the fibers (Zopf, column 1, line 66 – column 2, line 10).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Story in view of Zopf and in view of US Patent to Yamasaki et al., number 6,661,956.

Regarding claim 10, Story teaches a cable comprising a plurality of buffer tubes; a plurality of color-coded optical fibers within each buffer tube, and color-coded filling material disposed within each buffer tube wherein each buffer tube contains a different color of filling material (Figure 2, abstract, and column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the cable of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. Story also does not teach at regular intervals, identifying marks attached to and circumscribing each buffer tube. Yamasaki teaches buffer tubes with identification marks (column 3, lines 36-67 and column 4, line 62 – column 5, line 59). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the identification bands of Yamasaki in at least one buffer tube of Story. The motivation would have been to increase the number of individually identifiable buffer tubes.

Regarding claim 11, Story teaches a system for identifying buffer tubes, comprising: a plurality of buffer tubes each having an inner wall circumferentially surrounding a respective set of optical fibers (Figure 2); and a color-coded filling material (abstract, column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). It would have been obvious to

one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the system of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. Story also does not teach at regular intervals, identifying band markings attached to and circumscribing at least one buffer tube. Yamasaki teaches buffer tubes with identification bands and tape (column 3, lines 36-67 and column 4, line 62 – column 5, line 59). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the identification bands of Yamasaki in at least one buffer tube of Story. The motivation would have been to increase the number of individually identifiable buffer tubes. Story also teaches color-coded buffer tubes (abstract and column 2, lines 3-26). Story does not teach non-color-coded filling material and transparent buffer tubes, wherein the non-color coded filling material is disposed within the color-coded buffer tubes and the color-coded filling material is disposed within the transparent or translucent buffer tubes. Zopf teaches non-color-coded filling material and transparent buffer tubes, wherein non-color-coded filling materials can be disposed within color-coded buffer tubes and color-coded material can be disposed within transparent buffer tubes column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Story with the teachings of Zopf. The motivation would have been to increase the number of individually identifiable fibers used in the cable. Story also does not teach a gelatinous filling material which essentially occupies all of the internal volume. Zopf teaches color-coded

Art Unit: 2883

gelatinous filling materials occupying essentially all of the internal volume (column 1, line 66 – column 2, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the color-coded filling material of Story out of a gel material which essentially occupies all of the internal volume, as taught by Zopf.

The motivation would have been to reduce the stress on the fibers (Zopf, column 1, line 66 – column 2, line 10).

Allowable Subject Matter

Claims 8, 9, 18, and 31-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 8, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising a fluorescent colorant.

Regarding claim 9, the prior art, either individually or in combination, fails to disclose or render obvious that at least two buffer tubes have a common color, at least two buffer tubes are filled with common color color-coded filling material, and at least two optical fibers have a common color.

Regarding claim 18, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising a pearlescent colorant.

Art Unit: 2883

Regarding claim 31, the prior art, either individually or in combination, fails to disclose or render obvious that at least three buffer tubes have a common color and at least three optical fibers have a common color.

Regarding claim 32, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising pythalocyanine.

Regarding claim 33, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising azo dye.

Regarding claim 34, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising chromium oxide.

Regarding claim 35, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising lake pigment.

Regarding claim 36, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising quinolone.

Regarding claim 37, the prior art, either individually or in combination, fails to disclose or render obvious color-coded gels comprising lithopone.

Conclusion

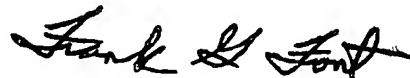
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

Art Unit: 2883

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMB



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800